



2 NM MARINE BEACON

VLB-2

SHORT RANGE LANTERN 1-2NM AT 0.74T

US COAST GUARD APPROVAL CFR 33 PART 66 AND PART 67

The VLB-2 is part of the high performing Vega LED marine beacon family and is designed for installation on buoys, fixed poles and land locations. This beacon is ideal for high latitudes regions (such as Alaska) with limited winter sunlight. Use the Vega calculator (example below) to decide whether the standard (SS with 9Ah battery) or extended (ES with 18Ah battery) model will suit your needs.



Self-contained Beacon

Stand-alone Beacon



Approved for use as Class C lights for artificial island and structures in
USCG CFR 33 Part 66 and Part 67

OUTSTANDING FUNCTIONALITY AND FEATURES

The VLB-2 from Vega:

- a strengthened unit that will perform in the toughest environments
- is fully waterproof (IP 68), its flexible gasket provides extra protection in temperature
- optional GPS synchronisation
- optional larger battery capacity suitable for high latitude locations with limited winter sunlight

Features include:

- uses long life GEL lead acid batteries that will continue to charge to -20°C and provide continuous operation at -30°C
- offers high autonomy (days with no solar charge) in a completely sealed, self-contained unit
- five colours meeting IALA requirements
- low energy design
- externally powered 3.5-16VDC model available (Stand-alone)

Programming features (with infrared remote control) include:

- intensity setting 0.5 – 5 Candela
- nine options for day to night transition light levels
- in excess of 256 flash characters
- a custom flash characteristic if required
- storage mode setting
- low battery voltage cut off
- read battery voltage
- LED type and firmware version

To check how the beacon will perform in your planned location use the solar calculator on our website (www.vega.co.nz). Enter the intensity, range and flash character you require and the calculator will take into account the lowest solar month as well as temperature and provide details of expected solar autonomy based on the worst conditions likely to be encountered.

VLB-2 solar power details:

| Model | Solar | Battery |
|------------------------------|-------|---------|
| Stand-alone (SA) | N/A | N/A |
| Standard Self-contained (SS) | 4W | 9Ah 4V |
| Extended Self-contained (ES) | 4W | 18Ah 4V |

This high capacity marine beacon uses the high efficiency optics and electronics that Vega is well known for and provides new levels of energy efficiency and autonomy for the utmost in reliability in the most extreme of weather conditions. With the latest technology on board, the VLB-2 is excellent value for money, offers low lifetime and maintenance costs and comes with an optional extended warranty. With thousands of these smart already in locations worldwide, the VLB-2 is setting a new standard for 2 NM solar marine beacons.

EXAMPLE CALCULATION FOR ANCHORAGE, ALASKA

| | |
|---------------------|---|
| Latitude | 61° North |
| Flash | 1 second on, 9 seconds off |
| Colour | White |
| Distance | 2NM |
| Divergence | 7° |
| Effective Intensity | 5 Candela |
| Autonomy | 83 days – Standard (SS) 167 days – Extended (ES) |

INCLUDED COMPONENTS



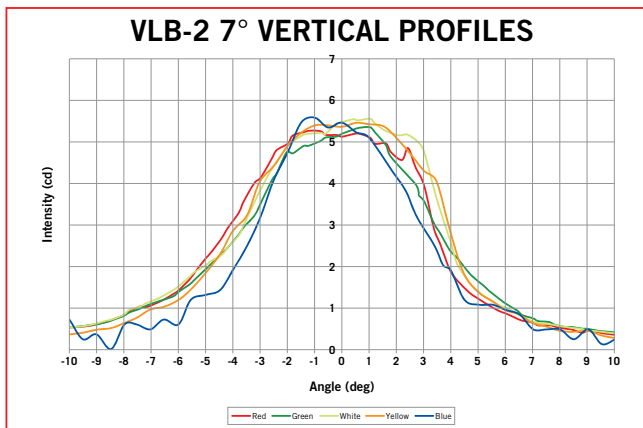
Infrared remote

Base with one or two 9Ah 4V batteries fitted

SPECIFICATIONS

OPTICAL SPECIFICATION

| | |
|------------------------------|--|
| Intensity | 0.5 – 5 Candela LEDs are temperature monitored to control intensity. Light intensity automatically adjusts with flash character setting (Schmidt-Clausen) |
| Horizontal Divergence | USCG 33CFR-83 |
| Vertical Divergence | 7° at 50% of peak intensity |
| Chromaticity | Colours meet IALA chromaticity requirements |



ELECTRICAL PERFORMANCE

| | |
|-------------------------|---|
| Reverse polarity | Protected |
| Battery | GEL lead-acid battery 9Ah 4V or 18Ah 4V (2x9Ah) |
| Charging | Stops at -20°C |
| Solar Panels | 4 Mono Crystalline panels |

TYPICAL BATTERY AUTONOMY (Q 1S 0.3)

| Model | Red | Green | White | Yellow |
|------------------|---------|---------|---------|---------|
| 9Ah (SS) | 28 days | 37 days | 35 days | 24 days |
| 18Ah (ES) | 56 days | 75 days | 71 days | 49 days |

*Typical battery autonomy for Chicago USA (using the longest night hours)

ENVIRONMENTAL

| | |
|------------------------------|---|
| Temperature | -30°C to +50°C |
| Cooling | Convection |
| Pressure Equalisation | Membrane in solar body |
| Salt | Continuous exposure saltwater and spray |

| | |
|------------------------|--|
| Wind | 140kt |
| Ice Loading | 22kg/m ² |
| Shock/Vibration | 75g shock in all directions; 5g vibration in all directions |

MATERIALS

| | |
|---------------------|--|
| Lens | Moulded acrylic (PMMA) |
| Bird Spike | Stainless steel centre spike |
| Body | UV stabilised transparent Nylon |
| Base | UV stabilised Nylon with 30% mineral fill |
| Solar Panels | Mono Crystalline silicon |
| Top Cap | UV stabilised ASA |
| Mounting | 3 or 4-hole on 150mm PCD or 2 hole on 128mm PCD |

STANDARDS

Marine Navigation Lights: USCG Approval CFR 33 Part 66 and Part 67 for artificial island and structures

Electromagnetic compatibility (EMC) / electromagnetic interference (EMI):

EN55015:2006 +A1:2007, +A2:2009 radiated and conducted emissions;
EN61547:2009;
EN61000-4-2:2008. Electrostatic Discharge, Immunity Level 4 (10KV air 6KV contact);
EN61000-4-3:2006 +A1:2007, +A2:2010 Radiation Immunity Class 1 (10V/m);
EN61000-4-5:2005 Class 3 Surge Immunity, 0.5KV lead to lead
EN61000-4-6:2008 conducted susceptibility;
FCC Part 15

Optical Test: IALA Recommendation E-122 (2001) and E-200-3 Part 3 (2008)

Colour: IALA Recommendation E-200-1 Part 1

Daylight: IALA Recommendation 1038

Power Supply: IEC60945 Section 7 normal and peak voltage, and reverse polarity protection

Ingress & Immersion: IP68 1.5m depth immersion for 1 hour

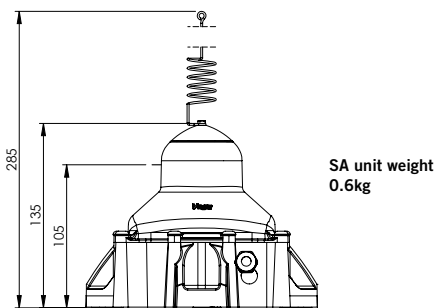
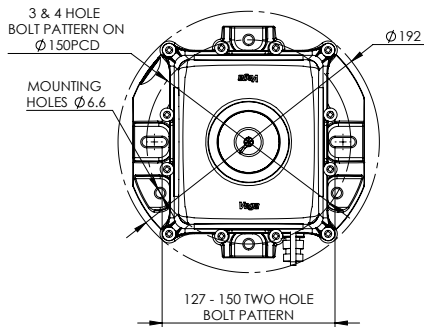
Shock: MIL-STD-202G method 213B Condition H

Vibration: MIL-STD-202G method 204D Condition B

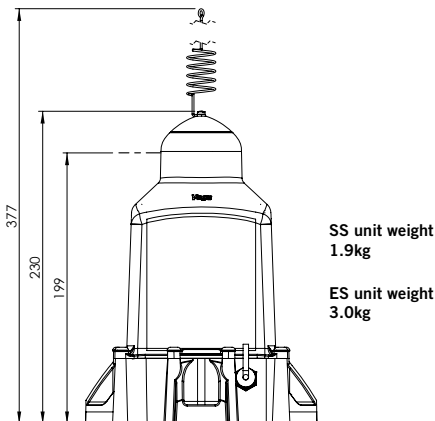
Hail: N/A. Solar panels are internal to body

DIMENSIONS & WEIGHTS

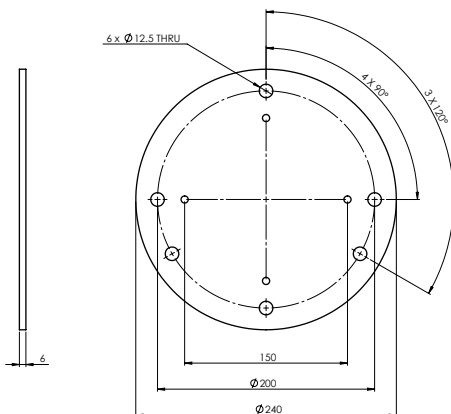
Stand-alone Unit (SA)



Self-contained Unit (SS and ES)



Optional 200mm PCD Adaptor Plate



PARTS FOR ORDERING

DESCRIPTION

VLB-2 LED Marine Beacon

PRODUCT CODE

VLB-2-C07-YY

WHERE

C = G (Green Light)
= R (Red Light)
= W (White Light)
= Y (Yellow Light)
= B (Blue Light)

YY = SA (Stand-alone)
= SS (Standard 9Ah Battery)
= ES (Extended 18Ah Battery)

FACTORY SPECIFICATIONS

| | |
|---|--------------------|
| Battery | EBAT-HZY4-9 |
| External Charging Plug and Sync Wire (SS and ES) | CP/SW |
| Battery holder (to convert from 1 to 2 batteries) | VLB-2-K01 |
| Sync Signal Converter (receive only) | 136-600 |
| 200mm PCD mounting plate (including bolts) | 202-500 |
| Infrared Remote | Remote-02 |
| Computer Programmer | Prog-01 |

NOTE: Refer to our website (www.vega.co.nz) if you require additional components or parts.



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